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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/365,342	07/30/1999	ELIZABETH G. HETZLER	G-305	1665

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EXAMINER

HAVAN, THU THAO

ART UNIT

PAPER NUMBER

2672

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/365,342	HETZLER ET AL.
	Examiner Thu-Thao Havan	Art Unit 2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 30 July 1999.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-4, 6, 12-17 and 20-25 is/are rejected.

7) Claim(s) 5, 7-11, 18 and 19 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

    1. Certified copies of the priority documents have been received.

    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    \* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings in this application are objected to by the Draftsperson as informal.

Any drawing corrections requested, but not made in the prior application should be repeated in this application if such changes are still desired. If the drawings were changed and approved during the prosecution of the prior application, a petition may be filed under 37 CFR 1.182 requesting the transfer of such drawings, provided the parent application has been abandoned. However, a copy of the drawings as originally filed must be included in the 37 CFR 1.60 application papers to indicate the original content.

### Claim Objections

2. Claims **5, 7-11, and 18-19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Re claim **5**, the prior art fails to anticipate or rendered obvious the claimed features of a missing strand is observed as a greater gap between remaining strands.

The prior art of record fails to anticipate or rendered obvious the technical features of claims **7-11**. The prior art fails to teach or suggest texture is selected from the group consisting of line type, line weight, color, display frequency, and combination thereof as recited in the claim.

Re claims 18-19, the prior art fails to anticipate or rendered obvious the claimed features of strands shown on one side of the surface indicate values exceed an upper threshold of a test and the strands on the other side of the surface indicate values lower than a low threshold for said test.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
5. Claims 1-4, 6, 12-17, and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prakriya et al. (US patent no. 6,154,220) in view of Eick et al. (US patent no. 5,835,085) and further in view of applicant's admitted prior art (page 4, lines 10-12, hereinafter, "prior art").

Re claim 1, the prior art Prakriya teaches a method of visualizing a relationship between at least two entities (col. 1, lines 21-33 and fig. 3-4--two entities are the different items of database records), having the steps of:

(a) mapping the at least two entities onto a surface (col. 1, lines 21-33 and lines 63-66; fig. 3-4); Prakriya teaches the two entities are database records such as record A and database record B which are visually represents on a layout surface (col. 1, lines 21-33 and lines 63-66; col. 2, lines 11-13; fig. 3-4);

(b) providing a relationship record for each of the at least two entities (col. 6, lines 36-62; fig. 3-4); Prakriya teaches a relationship between records A to H in figure 3-4;

(c) generating a display of the at least two entities together with at least one connector between the at least two entities for said visualizing said relationship from said relationship record (col. 2, lines 13-22); Prakriya teaches the rectilinear layout system routes connectors among the nodes to represent the relationship between the nodes (col. 2, lines 13-16); and

(d) said connector having two ends connected to a pair of said at least two entities, said connector having an extension between said two ends (col. 6, lines 29-47; col. 9, lines 2-24; fig. 3 and 7B); In figure 3, Prakriya teaches the connectors 312 to 319 extend between the different records. Furthermore, figure 7B teaches record A having connectors 312, 313, 314, 315, and 317 extending to each of different records (i.e. relationships).

Prakriya *fails* to explicitly recite as claimed a plurality of strands wherein each of said plurality of strands corresponds to each of a plurality of relationships. Eick, on the other hand, specifically discloses a plurality of strands wherein each of said plurality of strands corresponds to each of a plurality of relationships (col. 2, lines 38-67; col. 7, lines 5-22; fig. 3-4 and 6). Eick teaches the surface in figure 3 by disclosing points between two entities of a caller and callee (col. 1, lines 16-25). In figure 3, the relationship is established between the caller and callee. Furthermore, in figure 3, Eick teaches groups of nodes that have the most significant relationships appear near the center of the display (col. 2, lines 38-53). .

Therefore, having the combined teaching of Prakriya and Eick as a whole, one of ordinary skill in the art would have found it obvious to visually disclose relationships between nodes which corresponds to each of a plurality of relationships of Eick to have a plurality of strands wherein each of said plurality of strands corresponds to each of a plurality of relationships as claimed. Doing so would enable relationship between nodes distinguishable at a glance.

The prior art Prakriya and Eick teach substantially the same as recited in claim 1, but fails to specifically disclose "extension passing out of surface" as claimed. However, applicant's admitted prior art (page 4, lines 10-12) indicates that it's well known to have the connector having an extension between two ends, the extension passing out of the surface to improve the visualization of connection.

Therefore, taking the combined teaching of Prakriya, Eick and applicant's admitted prior art as a whole, it would have been obvious to combine extension passing out of surface as claimed to the modified system of Prakriya in view of Eick. Doing so would have improved visualization of relationships between at least the two entities.

Re claim 2, Eick teaches at least one of said plurality of strands passes out of said surface on one side of said surface and another of said plurality of strands passes out of said surface on an opposite side of said surface (fig. 3); In figure 3, Eick disclose the plurality of strands on both sides of the surface.

Re claim 3, Eick teaches each strand is distinguished from other strand(s) by a geometric gap therebetween (col. 12, lines 25-57); Eick teaches a layout algorithm that distinguished the gaps between nodes.

Re claim 4, Prakriya teaches each strand has an arc height (col. 8, lines 25-47).

Prakriya discloses the layout surface arc for the nodes.

Re claim 6, Prakriya teaches each strand is further distinguished with a texture (fig. 3-4). In figure 3, Prakriya discloses records A to H, which contains data or information or texture at each strand of record.

Re claim 12, Eick teaches plurality of strands is displayed as a single strand (col. 4, lines 29-48; fig. 3 and 6); Eick teaches in figures 3 and 6 depending on the zooming control panel that the user manipulates, the plurality of strands that are close together can become a single strand when the user zoom out of the display.

Re claim 13, Eick teaches plurality of strands is displayed as said plurality of strands (col. 4, lines 29-48; fig. 3 and 6); Eick teaches in figure 3 and 6 depending on the zooming control panel that the user manipulates, the plurality of stands become plurality of strand when the user zoom in closer to the focus point or the center of the display.

Re claim 14, Prakriya teaches at least two entities are clusters of members, said clusters having centroids, and said connector connects said centroids (col. 9, lines 2-24; col. 19, lines 11-34; fig. 7B). Prakriya teaches the centroid is the focus node in this case node A, which is the center of the nodes (col. 19, lines 11-34). Prakriya discloses in figure 7B record A have connectors between multiple entities (i.e. record A to H).

Re claim 15, Prakriya teaches substrands extend from each of said members to said connector connecting said centroids (col. 9, lines 2-24; col. 19, lines 11-34; fig. 7B).

In figure 7B, Prakriya discloses substrands such as Record D and Record E have connector that connecting to Record A which is the centroid.

Re claim 16, Prakriya teaches positioning said display (col. 1, lines 63-67; col. 2, lines 1-22 and lines 37-44; fig. 7B). Prakriya discloses the rectilinear layout system positioning the nodes so that the focus node is at the center of the layout surface (col. 2, lines 37-44).

Re claim 17, Eick teaches positioning is selected from the group consisting of rotate, pan, zoom and combinations thereof (col. 4, lines 29-64; fig. 6). In figure 6, Eick discloses the user can manipulate the positioning of the graphs by zooming or rearrange the graph so that nodes with significant relationships are grouped together (col. 4, lines 49-64).

Re claim 20, Eick teaches a user action may cause the display of all relationships corresponding to a given relationship type (col. 4, lines 29-64; fig. 6). Eick discloses the user selects a variety of computations, which rearrange the graph so that nodes with significant relationships are grouped together.

Re claim 21, Prakriay teaches a directionality of a relationship is indicated by line type (fig. 7B). In figure 7B, the connector displays the relationship between Record A and Record B to H.

Re claim 22, Eick teaches a user action may cause the display of either a single strand, aggregate strand, or multitextured strands (fig. 3 and 6). In figure 6, Eick discloses a user zooming in and out display aggregate or single strand.

Re claim 23, Eick teaches each "dot" is a cluster of multiple entities (fig. 3 and 6).

In figures 3 and 6, Eick discloses a particular dot in a cluster display different entities.

Re claim 24, Prakriya teaches a user action may cause the display of cluster to cluster strands, cluster to entity strands, or entity to entity strands (col. 1, lines 21-33; col. 19, lines 11-35; fig. 7B). In figure 7B, Prakriya teaches the user action displays entity to entity strands.

Re claim 25, Prakriya teaches mapping is by two-way document/topic iteration logic (col. 14, lines 58-67; col. 19, lines 5-19). Prakriya teaches the iteration logic by the pickfocusnode module (col. 14, lines 58-67). Furthermore, a rectilinear layout system iterates through information and defining its relationship (col. 19, lines 1-11).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lantrip, US patent no. 6,298,174

Mohda et al., US Patent No. 6,100,901

Rajala et al., US Patent No. 6,205,576

Caid et al., US Patent No. 5,794,178

Zhilayaev, US Patent No. 6,137,911

Homma et al., US Patent No. 5,179,643

Miura, US Patent No. 5,485,564

Yeo et al., US Patent No. 5,821,945

Gansner et al., US Patent No. 4,953,106

**Inquiries**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Thu-Thao Havan  
Art Unit: 2672

February 10, 2002

*Th Havan*